



Australian Bureau of Statistics

6302.0 - Average Weekly Earnings, Australia, May 2013

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ISSUE

November 2013
May 2014

Release Date

20 February 2014
14 August 2014

SUMMARY COMMENTARY

IN THIS ISSUE

FREQUENCY CHANGE

The frequency of the Average Weekly Earnings series has changed from quarterly to biannual. The May 2012 publication was the final quarterly issue and the November 2012 the first produced on a biannual basis. For full details on the change in frequency, refer to the [Information Paper: Changes to Average Weekly Earnings, Australia, April 2012](#) (cat. no. 6302.0.55.002).

SEASONALLY ADJUSTED AND TREND ESTIMATES

As part of the transition to a biannual frequency, an assessment was conducted on the feasibility of releasing biannual seasonally adjusted and trend estimates. It was determined that reducing the frequency of collection did not eliminate observed seasonality entirely for some time series leaving 27 biannual series needing seasonal adjustment. All other series are no longer seasonally adjusted and where this is applicable the seasonally adjusted estimate will be exactly equal to the original series estimate. Relevant series are annotated in the time series spreadsheets.

In addition, the change in frequency resulted in a slight change in the level of seasonally adjusted and trend estimates and, therefore, new series were produced and first released in the November 2012 edition. The series commence with May 2012 data. Those users seeking historical seasonally adjusted and trend estimates will be required to access past AWE editions, which are available by clicking the past and future releases tab at the top of this page. It is advised that seasonally adjusted and trend estimates produced before and after the May 2012 edition are not directly comparable. For further details on seasonally adjusted and trend estimates, refer to paragraphs 40 to 49 in the Explanatory Notes.

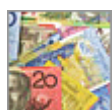
PUBLICATION FORMAT CHANGE

As advertised in the November 2012 edition, the ABS sought feedback on the content and format of the AWE e-magazine. The May 2013 edition includes changes based on the feedback received.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Fiona McLean on Perth (08) 9360 5304.

Key Figures



KEY FIGURES

KEY FIGURES

The following table contains the key Average Weekly Earnings figures for the May 2013 reference period.

Movements in average weekly earnings can be affected by changes in both the level of earnings per employee and in the composition of the labour force. Factors which can contribute to compositional change include variations in the proportion of full-time, part-time, casual and junior employees; variations in the occupational distribution within and across industries; and variations in the distribution of employment between industries.

Table 1: Average Weekly Earnings, Key Figures, Australia, May 2013

	May 2013 \$	May 2012 to May 2013 % change
Trend(a)		
Full-time adult average weekly ordinary time earnings	1 422.70	5.1
Full-time adult average weekly total earnings	1 485.80	4.8
All employees average weekly total earnings	1 105.20	4.8
Original		
Full-time adult average weekly ordinary time earnings	1 420.90	5.3
Full-time adult average weekly total earnings	1 482.50	4.9
All employees average weekly total earnings	1 105.00	4.9

(a) For further information regarding Trend estimates, please refer to paragraphs 44 to 49 of the Explanatory Notes.

TREND ESTIMATES

In the twelve months to May 2013, Trend series Full-Time Adult Average Weekly Ordinary Time Earnings increased by 5.1% to \$1,422.70.

The Full-Time Adult Average Weekly Total Earnings in May 2013 were \$1,485.80, a rise of 4.8% from the same time last year.

To access the time series spreadsheets related to the measures presented above, please refer to the following link or click on the downloads tab at the top of the page.

Australia



AUSTRALIA

AUSTRALIA

Table 2 below presents the key Average Weekly Earnings, Australia figures in Trend estimate terms. Trend estimates are obtained by removing the irregular component/non-seasonal influences from the data. They are considered a reliable guide to the underlying direction of the series.

Table 2: Average Weekly Earnings, Australia, Trend(a), May 2013

	May 2013 \$	May 2012 to May 2013 % change
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Males			
	Full-time adult average weekly ordinary time earnings	1 518.40	4.9
	Full-time adult average weekly total earnings	1 606.60	4.4
	All employees average weekly total earnings	1 357.10	5.5
Females			
	Full-time adult average weekly ordinary time earnings	1 252.20	4.9
	Full-time adult average weekly total earnings	1 268.90	4.8
	All employees average weekly total earnings	850.60	3.4
Persons			
	Full-time adult average weekly ordinary time earnings	1 422.70	5.1
	Full-time adult average weekly total earnings	1 485.80	4.8
	All employees average weekly total earnings	1 105.20	4.8

(a) For further information regarding Trend estimates, please refer to paragraphs 44 to 49 of the Explanatory Notes.

Original series data presented below has not been adjusted to remove the effects of either seasonal or irregular influences. Compared with May 2012, Full-Time Adult Average Weekly Ordinary Time Earnings have risen by 5.3% to \$1,420.90.

Table 3: Average Weekly Earnings, Australia, Original, May 2013, May 2013

	May 2013 \$	May 2012 to May 2013 % change
Males		
	Full-time adult average weekly ordinary time earnings	1 516.40 5.1
	Full-time adult average weekly total earnings	1 603.10 4.5
	All employees average weekly total earnings	1 356.70 5.6
Females		
	Full-time adult average weekly ordinary time earnings	1 250.50 5.1
	Full-time adult average weekly total earnings	1 267.40 5.0
	All employees average weekly total earnings	849.90 3.4
Persons		
	Full-time adult average weekly ordinary time earnings	1 420.90 5.3
	Full-time adult average weekly total earnings	1 482.50 4.9
	All employees average weekly total earnings	1 105.00 4.9

It is important to note that while Average Weekly Earnings data can be used to compare, at the very broad level, average earnings between males and females, such comparisons do not take into account a range of compositional differences, for example differences in occupation or hours worked, which contribute significantly to the differences observed between male and female earnings. Details of occupation and hours worked are not collected in the Average Weekly Earnings survey. For further comparisons between male and female wages, including hourly rates and by occupation, refer to [Employee Earnings and Hours](#) (cat. no. 6306.0).

For further earnings information related to industry, including breakdown by sex, please refer to the time series spreadsheets in the following [link](#) or click on the downloads tab at the top of the page.

Private & Public Sector Earnings



PRIVATE & PUBLIC SECTOR EARNINGS

PRIVATE & PUBLIC SECTOR EARNINGS

In May 2013, those employed in the Public sector had higher Full-Time Adult Average Weekly Ordinary Time Earnings than their Private sector counterparts, at \$1,513.60 and \$1,396.60 respectively (a difference of \$117.00). This difference was more pronounced in the All Employees Total Earnings series in May 2013; employees in the Public sector on average earned \$203.40 dollars per week more than those employed in the Private sector.

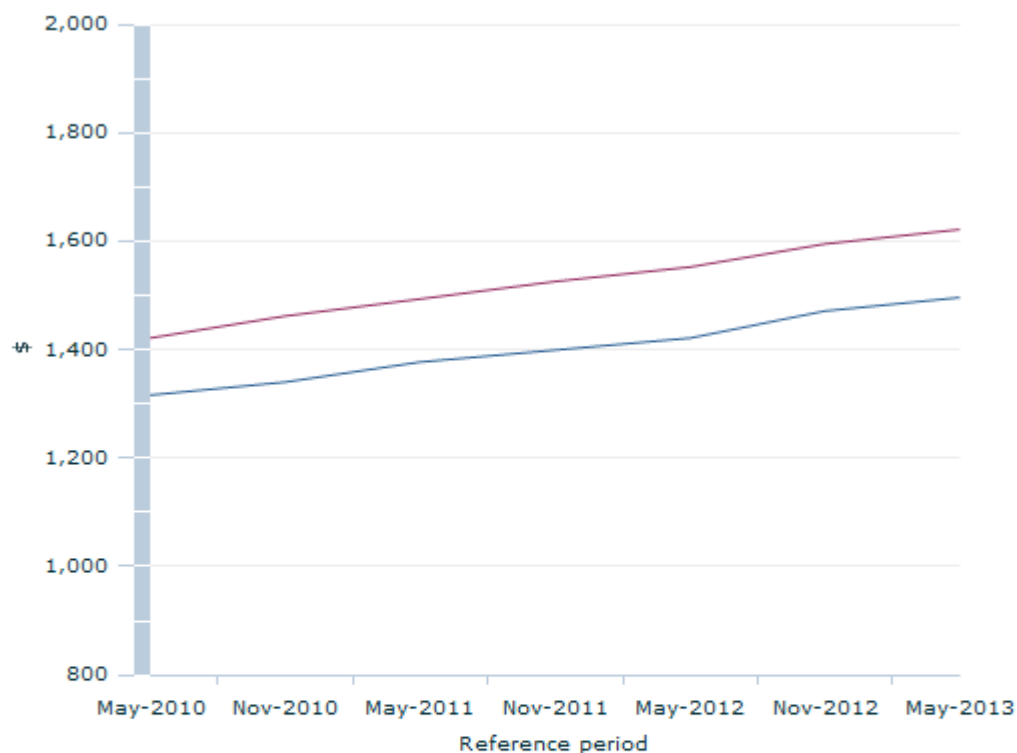
Table 4: Average Weekly Earnings, By Sector, Original, May 2013

	May 2013 \$	May 2012 to May 2013 % change
Australia		
Full-time adult average weekly ordinary time earnings	1 420.90	5.3
Full-time adult average weekly total earnings	1 482.50	4.9
All employees average weekly total earnings	1 105.00	4.9
Private Sector		
Full-time adult average weekly ordinary time earnings	1 396.60	5.7
Full-time adult average weekly total earnings	1 462.40	5.1
All employees average weekly total earnings	1 066.30	5.4
Public Sector		
Full-time adult average weekly ordinary time earnings	1 513.60	4.5
Full-time adult average weekly total earnings	1 559.60	4.4
All employees average weekly total earnings	1 269.70	3.9

In May 2013, the Full-Time Adult Male Average Weekly Ordinary Time Earnings were \$1,621.90 in the Public sector, and \$1,496.40 in the Private sector.

The Full-Time Adult Female Average Weekly Ordinary Time Earnings in May 2013 were \$1,408.80 in the Public sector, and \$1,184.90 in the Private sector.

Average Weekly Ordinary Time Earnings, Full Time Adults by Sector, Original, May 2013



■ Private ■ Public

Select a different graph

Males ▼

Save Chart Image

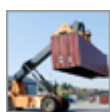
Australian Bureau of Statistics

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Source(s): Average Weekly Earnings, Australia

For further earnings information related to sector, including breakdown by sex and estimates in Trend and Seasonally Adjusted terms, please refer to the time series spreadsheets in the following [link](#) or click on the downloads tab at the top of the page.

Industry Earnings

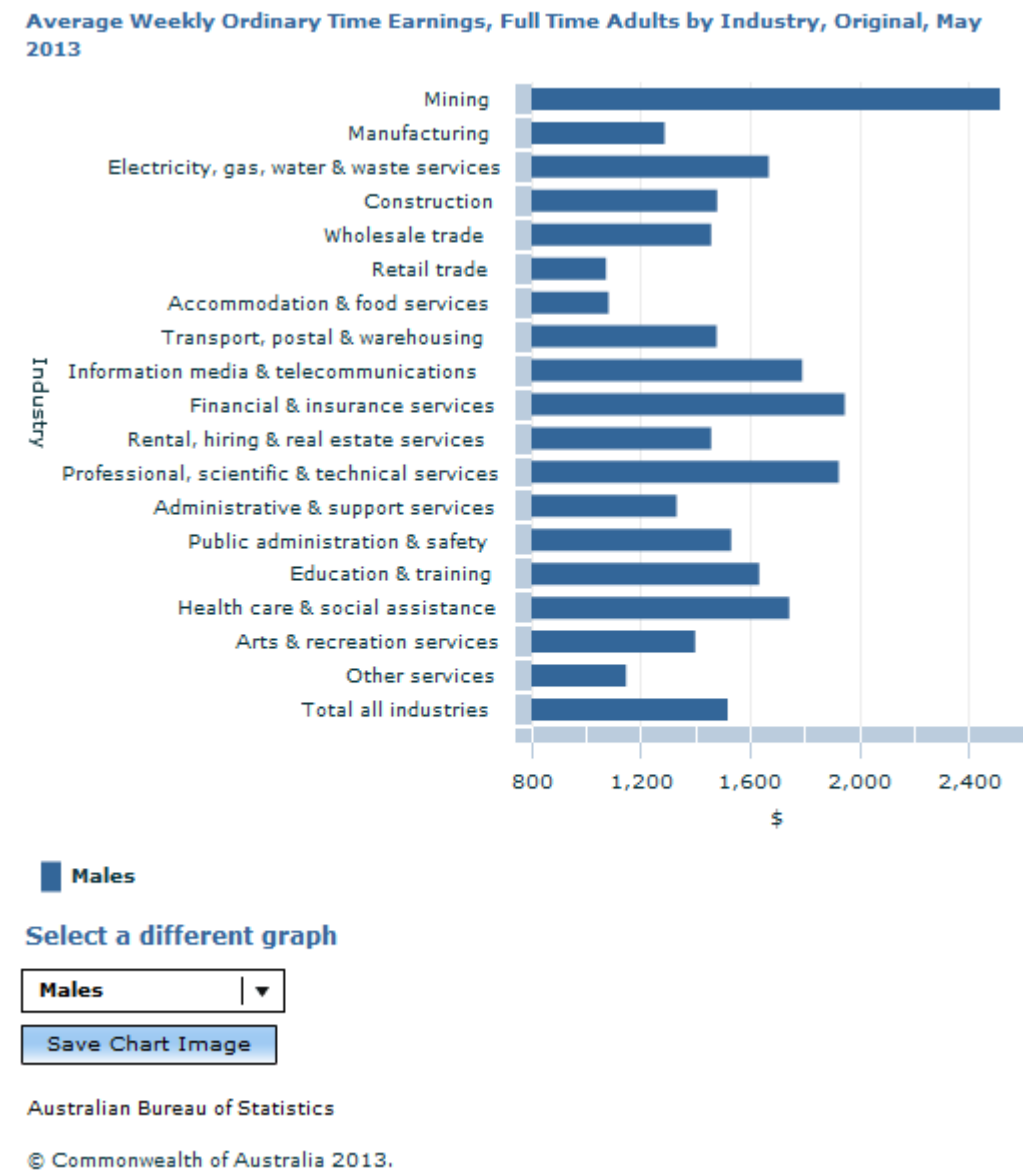


INDUSTRY EARNINGS

INDUSTRY EARNINGS

In May 2013, those employed in the Mining industry had the highest Full-Time Adult Average Weekly Ordinary Time Earnings in Australia at \$2,423.50. The industry with the

lowest level of Full-Time Adult Average Weekly Ordinary Time Earnings was the Retail trade industry (\$1,022.00).



Source(s): Average Weekly Earnings, Australia

For further earnings information related to industry, including breakdown by sex, please refer to the time series spreadsheets in the following [link](#) or click the downloads tab at the top of the page.

State & Territory Earnings

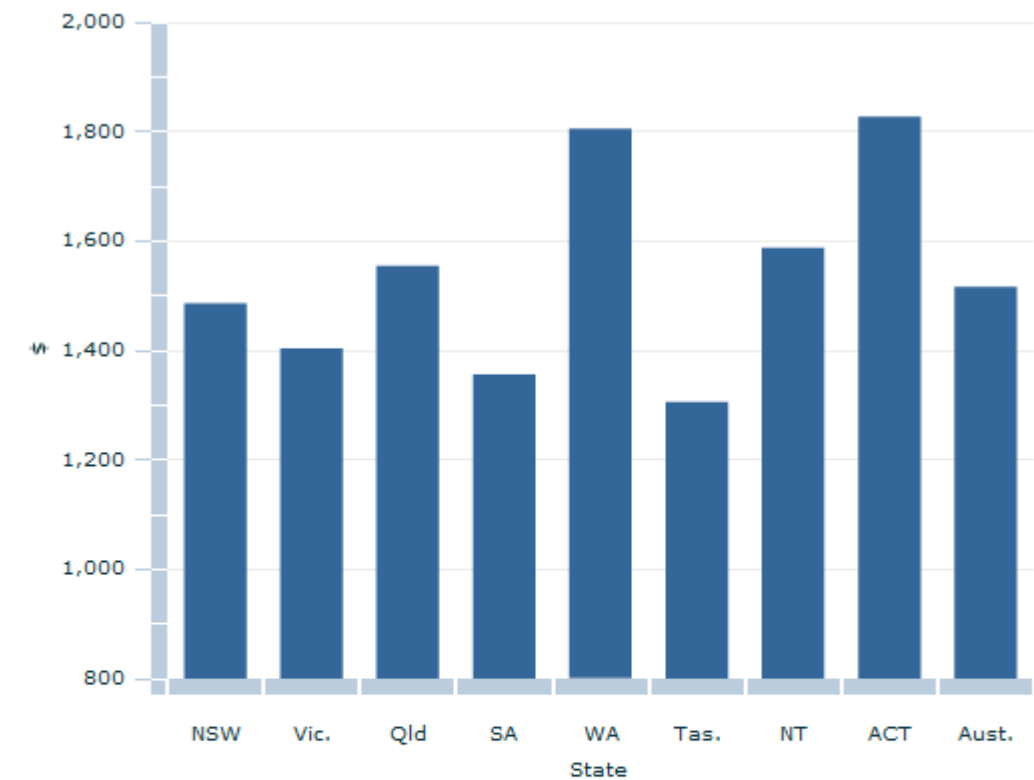


STATE & TERRITORY EARNINGS

STATE & TERRITORY EARNINGS

In May 2013, those employed in the Australian Capital Territory had the highest Full-Time Adult Average Weekly Ordinary Time Earnings at \$1,702.00, followed by Western Australia (\$1,644.80). The Australian Capital Territory has a high proportion of Public sector workers, who on average earn more than those in the Private sector. In recent years WA has experienced a resource sector boom which has had a significant influence on wages in the Mining industry as well as those businesses providing services to Mining (for example, some businesses in the Construction and Wholesale trade industries).

Average Weekly Ordinary Time Earnings, Full Time Adults by State, Original, May 2013



Males

Select a different graph

Males

▼

Save Chart Image

Australian Bureau of Statistics
© Commonwealth of Australia 2013.

Source(s): Average Weekly Earnings, Australia

For further earnings information related to States and Territories, including detailed breakdown by sex, please refer to the time series spreadsheets in the following [link](#) or click on the downloads tab at the top of the page.

Average Weekly Cash Earnings



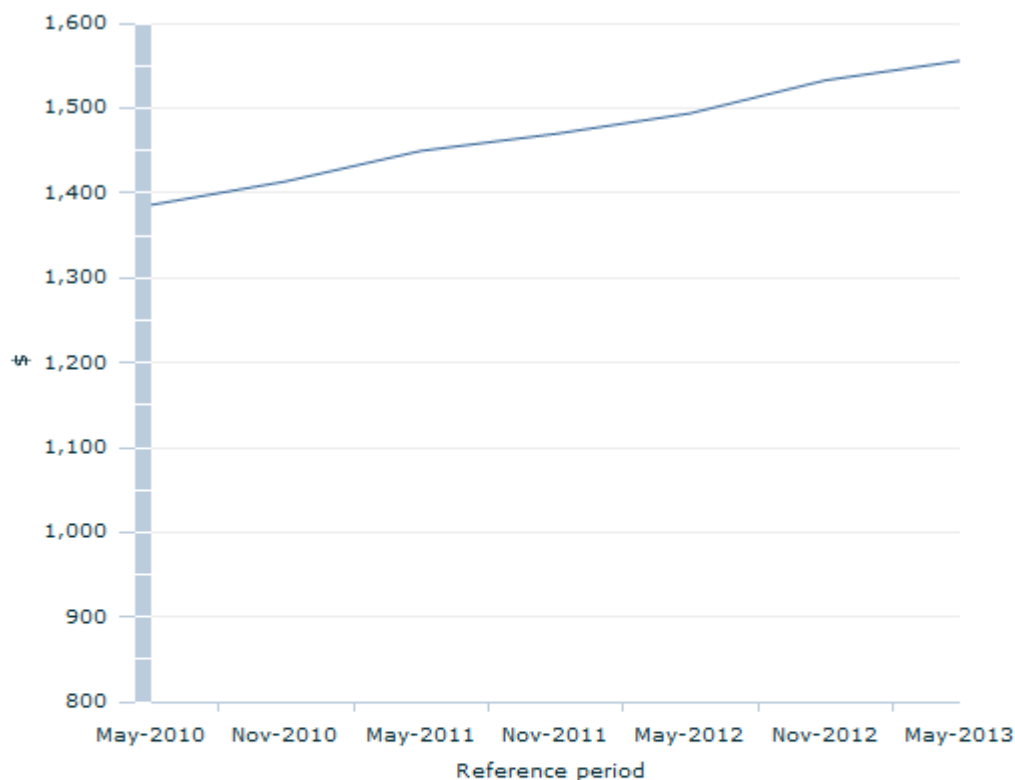
AVERAGE WEEKLY CASH EARNINGS

AVERAGE WEEKLY CASH EARNINGS

Commentary in the other sections of this e-magazine relates exclusively to estimates of employee earnings which exclude amounts salary sacrificed. This section includes information on Average Weekly Cash Earnings (AWCE), which provides estimates of employee earnings including amounts salary sacrificed.

Salary sacrifice is defined as an arrangement where an employee agrees to forgo part of his or her salary in return for benefits of a similar value. Common types of salary sacrifice arrangements include pre-tax contributions to superannuation funds and novated leases for motor vehicles.

Average Weekly Ordinary Time Cash Earnings, Full Time Adults, Original, May 2013



Males

Select a different graph

Males

Save Chart Image

Australian Bureau of Statistics

© Commonwealth of Australia 2013.

Source(s): Average Weekly Earnings, Australia

In May 2013, on average, full-time adult employees in Australia salary sacrificed \$43.50 (Full-time adult ordinary time cash earnings \$1,464.40 minus Full-time adult ordinary time earnings \$1,420.90).

Amounts salary sacrificed by an employee can be affected by a change in his or her earnings, for example, an increase in the level of overtime worked or commissions earned. Additionally, some employees sacrifice more of their salary at the beginning of the financial year and then the amount tapers off towards the end of the year when he or she has reached the concessional contributions cap for salary sacrificing superannuation. For other employees, the amount of salary sacrificed increases towards the end of the financial year to ensure the cap is reached. A feature article examining Salary Sacrifice in Australia has been included in the November 2012 edition of the Average Weekly Earnings release and can be found in the following [link](#).

For further earnings information related to Average Weekly Cash Earnings, please refer to the time series spreadsheets in the following [link](#) or click on the downloads tab at the top of the page.

About this Release

Contains estimates of average weekly ordinary time earnings and average weekly total earnings for full-time adult employees and average weekly total earnings for all employees, classified by sector and state or territory and by industry at the Australia level, for males, females and persons.

The frequency of the average weekly earnings series changed from quarterly to biannual in 2012. The May 2012 publication was the last quarterly issue and the November 2012 the first produced on a biannual basis. From 2013 onwards, AWE data will be produced twice a year relating to May and November reference periods.

Explanatory Notes

Explanatory Notes

EXPLANATORY NOTES

INTRODUCTION

1 This publication contains biannual estimates of Average Weekly Earnings (AWE) based on information obtained from a sample survey of employers.

CONCEPTS, SOURCES AND METHODS

2 Descriptions of the underlying concepts of Australia's AWE statistics, and the sources and methods used in compiling these estimates, are presented in [Labour Statistics: Concepts](#),

REFERENCE PERIOD

3 AWE is produced for the June and December quarters. The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the reference quarter (i.e. May and November). Where a pay period is fortnightly or monthly, etc., the employer is requested to report only one week's proportion.

SCOPE AND COVERAGE

4 All wage and salary earners who received pay for the reference period are represented in the AWE survey, except:

- members of the Australian permanent defence forces;
- employees of enterprises primarily engaged in agriculture, forestry and fishing;
- employees of private households;
- employees of overseas embassies, consulates, etc.;
- employees based outside Australia; and
- employees on workers' compensation who are not paid through the payroll.

5 Also excluded are the following persons who are not regarded as employees for the purposes of this survey:

- casual employees who did not receive pay during the reference period;
- employees on leave without pay who did not receive pay during the reference period;
- employees on strike, or stood down, who did not receive pay during the reference period;
- directors who are not paid a salary;
- proprietors/partners of unincorporated businesses;
- self-employed persons such as subcontractors, owner/drivers, consultants;
- persons paid solely by commission without a retainer; and
- employees paid under the Australian Government's Paid Parental Leave Scheme.

6 The sample for AWE, like most Australian Bureau of Statistics (ABS) business surveys, is selected from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding (PAYGW) scheme. The business register is updated quarterly to take account of:

- new businesses;
- takeovers and mergers;
- changes in industry classification;
- changes in the number of employees;
- businesses which have ceased employing; and
- other general business changes.

7 The estimates include an allowance for the time it takes newly registered businesses to be added to the survey population.

8 Businesses which have ceased employing are identified when the ATO cancels their

PAYGW registration. In addition, businesses which have not remitted under the PAYGW scheme for the previous five quarters are removed from the population.

SURVEY DESIGN

9 A sample of 5,500 employer units is selected from the ABS Business Register to ensure adequate state, industry and sector representation. The sample is updated each survey period to reflect the changes described in paragraph 6. These changes arise from the emergence of new businesses, takeovers and mergers, changes to industry classification, changes in the number of employees, and businesses which have ceased operations. Such updating of the business register can contribute to movements in the AWE estimates.

10 A sample redesign of the AWE survey was implemented in August 2009 incorporating the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 1.0) (cat. no. 1292.0).

11 The statistical unit for the survey comprises all the activities of an employer in a particular state or territory based on the Australian Business Number (ABN) unit or Type of Activity Unit. Each statistical unit is classified to an industry which reflects the predominant activity of the business. The statistical units are stratified by state, sector, industry and employment size, and within each stratum, statistical units are selected with equal probability.

INDUSTRY CLASSIFICATION

12 The statistics in this release are classified to industry in accordance with the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 1.0) (cat. no. 1292.0). This replaced the 1993 edition of ANZSIC in the August 2009 issue of this publication, which had been in use since 1994.

13 The 2006 edition of ANZSIC was developed to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with major international classification standards.

SURVEY FREQUENCY

14 Prior to 2012, Average Weekly Earnings was conducted on a quarterly basis. However, the frequency of the AWE survey is now biannual, with the May 2012 edition being the last quarterly issue and the November 2012 edition the first produced on a biannual basis. AWE data is now produced twice a year relating to the May and November reference periods only. Data is collected and released on the same basis as before for the May and November reference periods. For full details on the change in frequency, refer to the Information Paper: Changes to Average Weekly Earnings, Australia, April 2012 (cat. no. 6302.0.55.002)

15 As a result of the change in frequency, new seasonally adjusted and trend estimate series are produced (refer to paragraphs 40-49 below).

IMPACT OF STATISTICAL CHANGES IMPLEMENTED IN AUGUST 2009

16 With effect from the August 2009 edition, this publication presents data on the basis of ANZSIC 2006. At this time the ABS also implemented a sample redesign. The changes

resulted in a shift in the level of the series from ANZSIC 1993 to ANZSIC 2006 estimates. The difference in the level of the two series was measured and backcast into the historical series to make a time series of estimates on an ANZSIC 2006 basis. Because of the changes to level estimates, quarterly and annual percentage change movements for the ANZSIC 2006 AWE series are not identical to those under ANZSIC 1993. Differences at the state, sector and Australia levels are generally insignificant and within current released standard errors for each series.

17 Published industry series have been backcast and data from August 1994 to May 2009 are available on the basis of both editions of ANZSIC on the ABS website. More information about these changes can be found in the Information Paper: Changes to Average Weekly Earnings, Australia, Aug 2009 (ABS cat. no. 6302.0.55.002).

CHANGES TO THE ABS BUSINESS REGISTER

18 The introduction of The New Tax System in July 2000 had a number of significant implications for ABS business statistics, including changes to the populations for most business surveys. These implications are discussed in general terms in the Information Papers: ABS Statistics and The New Tax System, 2000 (cat. no. 1358.0) and Improvements in ABS Economic Statistics [Arising from The New Tax System], 2002 (cat. no. 1372.0). In relation to AWE, these changes caused a greater than normal rotation of businesses included in the sample for the May 2001 and August 2002 surveys.

STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

19 The ABS uses an economic statistics units model of the ABS Business Register to describe the characteristics of businesses, and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS.

20 The current units model was introduced into the ABS in mid 2002, to better use the information available as a result of The New Tax System. The model allocates businesses to one of two sub-populations. The vast majority of businesses are in the Non-Profiled Population, while the remaining businesses are in the Profiled Population. Together, these two sub-populations make up the ABS Business Register population.

Non-Profiled Population

21 Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN), and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit is used as the economic statistics unit in economic collections.

Profiled Population

22 For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with businesses. These businesses constitute the Profiled Population. This population consists

typically of large, complex and diverse businesses. The statistical units model described below was introduced to cover such businesses.

23 Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the **Corporations Legislation Amendment Act 1991**), including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.

24 Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional subsector (i.e. they are all classified to a single SISCAs subsector).

25 Type of Activity Unit (TAU): The TAU comprises one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

26 For more information please refer to the Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System], 2002 (cat. no. 1372.0).

GENERAL NOTES ON ESTIMATES

27 AWE statistics represent average gross (before tax) earnings of employees and do not relate to average award rates or to the earnings of the 'average person'. AWE estimates are derived by dividing estimates of weekly total earnings by estimates of the number of employees. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the wage and salary earner segment of the labour force.

28 There are several factors which can contribute to compositional changes, including variations over time in the proportions of full-time, part-time, casual and junior employees; variations in the occupational distribution within and across industries; and variations in the distribution of employment between industries. Such effects may apply differently within different states and territories, and over time.

AVERAGE WEEKLY CASH EARNINGS

29 The definition of earnings currently used in the AWE survey is, broadly, current and regular payments in cash to employees for work done. Thus, earnings series from the AWE survey historically excluded amounts salary sacrificed, as these had been considered conceptually as payments in kind. However, under the revised conceptual framework for measures of employee remuneration, as presented in Information Paper: Changes to ABS Measures of Employee Remuneration, 2006 (cat. no. 6313.0), amounts salary sacrificed are now considered conceptually to be wages and salaries in cash. Accordingly, the AWE questionnaire was redesigned, and from August 2007, the collection of information on amounts salary sacrificed by employees commenced. However, the AWE series has continued to be published on the old conceptual basis (i.e. exclusive of amounts salary

sacrificed) to maintain long term comparability of the time series.

30 Although the AWE survey has conceptually excluded amounts salary sacrificed, in practice, there was evidence that earnings series from the AWE survey had inadvertently included some amounts salary sacrificed. The ABS worked closely with data providers to identify any instances of misreporting, and to amend their reporting practices where necessary.

31 As a result of the separate collection of salary sacrificed amounts from August 2007, and other analyses, the ABS was able to quantify the extent of mis-reporting that had occurred, and to estimate the impact of this mis-reporting on the historical series. Consequently, AWE data series for August 1996 through to May 2008 were revised to exclude all amounts salary sacrificed. For further information see [Information Paper: Revisions to the Average Weekly Earnings Series, Aug 2008](#) (cat. no. 6302.0.55.001) released 11 November 2008.

32 Since the May 2011 edition of this publication, Average Weekly Cash Earnings (AWCE) series have also been released as additional (not replacement) AWE series. The difference between the AWCE and the AWE series is the average weekly amount salary sacrificed. Data relating to the AWCE series are available in the time series spreadsheets on the Downloads tab at the top of this page. For more information relating to the AWCE series, refer to the [Information Paper: Release of Average Weekly Cash Earnings Series, May 2011](#) (cat. no. 6302.0.55.003) and for broad level analysis and findings refer to the [Information Paper: Changes to Average Weekly Earnings, Australia, April 2012](#) (cat. no. 6302.0.55.002).

COMPARABILITY OF SERIES

33 The current AWE series, based on information obtained from a sample survey of employers, was introduced in August 1981. Prior to August 1981, the AWE series was based principally on information from payroll tax returns. Revised estimates of AWE for the period August 1981 to November 1983 were included in [Average Weekly Earnings, States and Australia, March 1984](#) (cat. no. 6302.0) published on 12 July 1984 and available on the ABS website. Users who need a measure of the movement in earnings for a period which spans both the payroll tax based and employer survey series should refer to Table 3 in that publication which presents both series linked to a common index base (August 1981 = 100.0).

COMPARABILITY WITH WAGE PRICE INDEX

34 Period-to-period movements for the AWE series are not comparable with those for the Wage Price Index (WPI). It is important to recognise that the two series have different purposes and concepts and use different sample selection and estimation methodologies.

35 The AWE survey is designed to measure the level of average earnings in Australia at a point in time. It does this by collecting information from businesses on their number of employees and their total gross weekly earnings for a specific pay period. The WPI is a price index designed to measure the change over time in the price of wages and salaries. It does this by pricing specific jobs, in terms of wage and salary payments to employees occupying the jobs, and collecting information from businesses each quarter on price changes in those jobs. It is unaffected by changes in the quality and quantity of labour services purchased by employers.

36 In addition to changes in the price of labour, AWE estimates are affected by changes in hours worked and by compositional changes in the employee workforce (see paragraphs 27

and 28). The WPI prices a fixed quantum of labour services for each job, and hence changes to base earnings resulting from increases in hours worked or from changes in the composition of the employee workforce will not be reflected in the index.

37 For further information on the WPI, please refer to the Explanatory Notes of Wage Price Index, Australia (cat. no. 6345.0) and Wage Price Index: Concepts, Sources and Methods, 2012 (cat. no. 6351.0.55.001) which are available on the ABS web site.

EFFECTS OF ROUNDING

38 Estimates of average weekly earnings are rounded to the nearest 10 cents.

39 Estimates of percentage change have been calculated using unrounded estimates and may be different from, but are more accurate than, movements obtained from calculating percentage changes using the rounded estimates presented in this publication.

SEASONAL ADJUSTMENT

40 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variation. If a time series has no identifiable seasonality it is not seasonally adjusted.

41 As part of the transition to a biannual frequency, an assessment was conducted on the feasibility of releasing biannual seasonally adjusted and trend estimates. It was determined that reducing the frequency of collection did not eliminate observed seasonality entirely for some time series leaving 27 biannual series needing seasonal adjustment. Producing seasonally adjusted estimates for biannual time series poses problems as producing seasonally adjusted estimates for this frequency is non-standard in ABS and other international agency publications. As a result, the seasonal adjustment has been performed using an experimental methodology.

42 The new biannual seasonally adjusted series, commencing November 2012, uses the ABS's existing quarterly seasonal adjustment method. Linear interpolation is used to impute "missing" quarterly original observations based on the succeeding and preceding survey estimates. In this way a quarterly original data series is synthesised from the actual biannual data collected. These synthesised estimates are used in the seasonal adjustment process and are not released. The concurrent seasonal adjustment technique and Autoregressive Integrated Moving Average (ARIMA) modelling are used to estimate seasonal factors from this quarterly synthesised original data.

43 Under concurrent seasonal adjustment, the estimates of seasonal factors are improved as new or revised original estimates become available each period. However, for this collection, the seasonally adjusted estimates up to May 2012, presented in the May 2012 edition, will not be revised as they were based on actual quarterly observations, whereas those after that point are based on biannual observations.

TREND ESTIMATES

44 Seasonally adjusted estimates can be smoothed to reduce the impact of irregular or non-seasonal influences. Smoothed seasonally adjusted series are called trend estimates.

45 The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the original estimates and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.

46 The trend estimates in this publication, obtained by dampening out the irregular component from the seasonally adjusted series, are calculated using a centred 7-term Henderson moving average of the seasonally adjusted estimates of quarterly synthesised original data. Estimates for the two most recent periods cannot be calculated using this centred average method: instead an asymmetric average is used. This can lead to revisions in the trend estimates for the last two observations when data become available for later periods. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors. If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few observations as new data become available. However, it is important to note that this does not make the trend series inferior to the seasonally adjusted or original series.

47 Please note that calculating seasonally adjusted and trend estimates on the synthesised quarterly series has resulted in a slight change in the level of the data.

48 Those users seeking historical seasonally adjusted and trend estimates will be required to access past AWE editions, which are available on the ABS website. It is advised that seasonally adjusted and trend estimates produced before and after the May 2012 edition are not directly comparable and these historical series before the May 2012 edition will not be produced from less frequent biannual observations.

49 The privatisation of Telstra Corporation in November 2006 impacted on the private sector and public sector AWE series. For the purposes of ABS statistics, this change from public sector to private sector was effective from March quarter 2007. The effect of this change was significant for both the private sector and public sector series. As a result, a trend break was applied to both series between November 2006 and February 2007. For more information please see [Information Paper: Future Treatment of Telstra in ABS Statistics, 2007](#) (cat. no. 8102.0), released 26 February 2007.

RELATED PUBLICATIONS

50 The following publications contain related information:

- [Australian Labour Market Statistics](#) (cat. no. 6105.0)-issued annually;
- [Employee Earnings and Hours, Australia](#) (cat. no. 6306.0)-issued biennially;
- [Employee Earnings, Benefits and Trade Union Membership, Australia](#) (cat. no. 6310.0)-issued annually;
- [Employment and Earnings, Public Sector, Australia](#) (cat. no. 6248.0.55.002)-issued annually;
- [Experimental Estimates, Regional Wage and Salary Earner Statistics, Australia](#) (cat. no. 5673.0);
- [Gender Indicators, Australia](#) (cat. no. 4125.0)-issued biennially;
- [Information Paper: Changes to ABS Measures of Employee Remuneration, 2006](#) (cat. no. 6313.0)-issued 14 November 2006;

- [Information Paper: Changes to Average Weekly Earnings, Australia, Aug 2009](#) (cat. no. 6302.0.55.002)-issued 5 November 2009;
- [Information Paper: Changes to Average Weekly Earnings, Australia, Apr 2012](#) (cat. no. 6302.0.55.002)-issued 16 April 2012;
- [Information Paper: Improvements in ABS Economic Statistics \[Arising from The New Tax System\], 2002](#) (cat. no. 1372.0)-issued 6 May 2002;
- [Information Paper: Release of Average Weekly Cash Earnings Series, May 2011](#) (cat. no. 6302.0.55.003)-issued 21 July 2011;
- [Information Paper: Revisions to Average Weekly Earnings Series, Aug 2008](#) (cat. no. 6302.0.55.001)-issued 11 November 2008;
- [Labour Force, Australia](#) (cat. no. 6202.0)-issued monthly;
- [Wage Price Index, Australia](#) (cat. no. 6345.0)-issued quarterly; and
- [Labour Statistics: Concepts, Sources and Methods, 2013](#) (cat. no. 6102.0.55.001)

Glossary

GLOSSARY

Adult employees

Adult employees are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation.

Average weekly cash earnings

Average weekly cash earnings represents average gross (before tax) earnings of employees, inclusive of salary sacrifice. Average weekly cash earnings differs from average weekly earnings by the average weekly amount salary sacrificed.

Average weekly earnings

Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees.

Employees

Employees refer to all wage and salary earners (as defined in paragraphs 4 and 5 of the Explanatory Notes) who received pay for any part of the reference period.

Full-time employees

Full-time employees are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

Reference period

The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the reference quarter. Where a pay period is fortnightly or

monthly, etc., the employer is requested to report only one week's proportion.

Salary Sacrifice

Salary sacrifice is defined as an arrangement where an employee agrees to forgo part of their pre-tax salary in return for benefits. Common types of salary sacrifice arrangements include pre-tax contributions to superannuation funds and novated leases for motor vehicles.

Sector

Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth and State parliaments. All remaining employees are classified as private sector.

Weekly ordinary time earnings

Weekly ordinary time earnings refers to one week's earnings of employees for the reference period, attributable to award, standard or agreed hours of work. It is calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made. Included in ordinary time earnings are award, workplace and enterprise bargaining payments, and other agreed base rates of pay, over-award and over-agreed payments, penalty payments, shift and other allowances, commissions and retainers, bonuses and similar payments related to the reference period, payments under incentive or piecework, payments under profit sharing schemes normally paid each pay period, payment for leave taken during the reference period, all workers' compensation payments made through the payroll, and salary payments made to directors. Excluded are amounts salary sacrificed, non cash components of salary packages, overtime payments, reimbursements to employees for travel, entertainment, meals and other expenditure incurred in conducting the business of their employer, and other payments not related to the reference period.

Weekly total earnings

Weekly total earnings of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.

Abbreviations

ABBREVIATIONS

ABN	Australian Business Number
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ARIMA	autoregressive integrated moving average
ATO	Australian Taxation Office
AWCE	average weekly cash earnings
AWE	average weekly earnings
PAYGW	pay-as-you-go withholding
SISCA	Standard Institutional Sector Classification of Australia
TAU	type of activity unit
WPI	wage price index

Quality Declaration - Summary

QUALITY DECLARATION - SUMMARY

INSTITUTIONAL ENVIRONMENT

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

RELEVANCE

The biannual Survey of Average Weekly Earnings (AWE) produces estimates of average gross weekly earnings associated with employee jobs in Australia, at a point in time. Level estimates and estimates of movement in AWE are linked to both state and federal legislation for adjusting a variety of government payments. AWE data are also used for analysing movements in average earnings, framing and supporting wage claims/submissions, monitoring wage equity and developing taxation and social policies.

The key earnings series produced from the survey are:

- full-time adult ordinary time earnings (commonly referred to as AWOTE);
- full-time adult total earnings;
- all employees total earnings.

Each of the above series is available for males, females and persons. Estimates are available by state/territory, industry and sector. Seasonally adjusted and trend estimates are produced for key series. Cash series estimates, which are inclusive of amounts salary sacrificed, are also available.

TIMELINESS

AWE is produced for the June and December quarters. The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the reference quarter (i.e. May and November). Where a pay period is fortnightly or monthly, etc., the employer is requested to report only one week's proportion.

Prior to 2012, Average Weekly Earnings was conducted on a quarterly basis. The frequency of the AWE survey was changed to biannual with effect from the 2012/13 financial year. The May 2012 publication was the last quarterly issue and the November 2012 the first produced on a biannual basis.

AWE estimates are released approximately 13 weeks after the reference date for the May edition and 14 weeks after the reference date for the November edition due to the Christmas and New Year period.

ACCURACY

Information for the AWE survey is collected via web form questionnaires which are distributed to approximately 5,500 employers. The population of employers is stratified by state, sector, industry division and employment size to ensure adequate state, sector and industry representation. A minimum response rate of 95% is achieved for the survey as a whole and for each state, sector and industry.

There are two principal sources of error in surveys, sampling error and non-sampling error. Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise non-sampling error by the careful design and testing of questionnaires, detailed checking of the reported data and direct follow up with providers where significant errors are detected.

Sampling error occurs when a sample or subset of the population is surveyed rather than the entire population. One measure of the likely difference resulting from not including all of the population in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the whole population had been included in the survey.

AWE estimates are seasonally adjusted to remove the estimated effects of normal seasonal variation from the series. The seasonally adjusted series are further smoothed to reduce the impact of irregular or non-seasonal factors. Smoothed seasonally adjusted series are called trend estimates. As data becomes available for the next period there are usually revisions in the seasonally adjusted and trend estimates for the previous periods.

The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the original estimates and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.

COHERENCE

The current AWE series, based on information obtained from a sample survey of employers, was introduced in August 1981. Prior to August 1981 the AWE series was based primarily on information from payroll tax returns.

Data collection methodology has been improved over time, including survey definitions and sample design. Seasonally adjusted estimates were introduced in 1983 and trend estimates were introduced in 1993.

The AWE survey uses Australian standard classifications to facilitate data comparability across statistical series. From the August 2009 issue of the AWE publication, data is presented using the 2006 edition of the Australian and New Zealand Standard Industrial Classification (ANZSIC). The 2006 edition of ANZSIC was developed to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with major international classification standards.

Industry data from August 2009 is only available on an ANZSIC 2006 basis. Published industry series have been backcast and data from August 1994 to May 2009 are available on the ABS website on the basis of both the 2006 edition of ANZSIC, and the previous 1993 edition.

The ABS conducts a number of sample surveys of businesses which collect information about wages and salaries. One of these, the Wage Price Index, is designed to measure the change over time in the price of wages and salaries. Period-to-period movements for the AWE series are not comparable with those for the Wage Price Index as the two series have different purposes and concepts and use different sample selection and estimation methodologies.

INTERPRETABILITY

Average weekly earnings statistics represent average gross earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Changes in the averages may be affected not only by changes in the level of earnings of employees, but also by changes in the overall composition of the wage and salary earner segment of the labour force.

There are several factors which can contribute to compositional changes, including variations over time in the proportions of full-time, part-time, casual and junior employees; variations in the occupational distribution within and across industries; variations in the distribution of employment between industries; and variations in the proportion of male and female employees. Such effects may apply differently within different states and territories, and over time.

Average Weekly Earnings, Australia (cat. no. 6302.0) contains Explanatory Notes, a Glossary and a Technical Note which provide further information about data sources, terminology and other technical aspects of the series.

ACCESSIBILITY

Average Weekly Earnings, Australia (cat. no. 6302.0) is available electronically from the ABS website and includes downloadable Excel data files for time series data.

Sampling Error (Technical Note)

TECHNICAL NOTE SAMPLING ERROR

RELIABILITY OF ESTIMATES

1 As the estimates in this publication are based on information relating to a sample of employers, rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. This difference, called **sampling error**, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as **non-sampling error** and may occur in any enumeration whether it be a full count or a sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

2 The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the **standard error** which indicates the

degree to which an estimate may vary from the value which would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors. Standard errors are provided in tables 3,6,9,10 and 13 to 17.

3 An example of the use of a standard error is as follows. If the estimated average earnings were \$1,100.00 with a standard error of \$7.00, then there would be about two chances in three that a full enumeration would have given an estimate in the range \$1,093.00 to \$1,107.00 and about nineteen chances in twenty that it would be in the range \$1,086.00 to \$1,114.00.

4 Another measure of the sampling error is the **relative standard error**, which is obtained by expressing the standard error as a percentage of the estimate.